

In re Application of Tummala et al.,
S.N. 10/713,998
Filed: 11/14/2003
Attorney Docket No. QA0285

downstream from the reaction zone and in flow communication with the reactor discharge tube. However, this interpretation calls for all these different zones to be recognized in the single glass tube. This does not seem to be a reasonable interpretation. The claimed invention is not a single glass tube and is not intended to be.

The claimed invention is an apparatus for the continuous production of gaseous chloramine comprising at least one reactor, that comprising a reaction zone and at least one reactor discharge tube in flow communication therewith, the reactor having at least two reactor feed tubes for concentrically feeding feed gas to the reaction zone; and at least one solids which is physically separate from the reaction zone and positioned downstream of said reaction zone, in flow communication with the at least one said reactor discharge tube. As can be seen from Applicants' Figures 3 and 4, the product gas stream, after leaving the reaction zone, may be fed to separate solids collection systems. In the case of Figure 4, there are two feed tubes which lead to two separate collection units. No such apparatus is represented in Sisler. Accordingly, Applicants maintain that Sisler cannot and does not anticipate the invention of claim 10. Applicants are of the belief that these remarks are sufficient to remove any remaining lack of clarity about the nature of the claimed invention; nonetheless claim 10 has been amended to clarify that the solids collection system is separate from the reaction zone.

Sisler only teaches a single glass reaction tube in which ammonia and chlorine are reacted and which is "packed with glass wool, loosely in the fore part of the reactor and more tightly near the outlet end.... [to] completely filter out the ammonium chloride from the emergent gas stream." See column 3, lines 54-56. The glass wool serves the purpose of solids collection. This apparatus is not the same as the apparatus that is presently claimed, i.e. at least one reactor comprising a reaction zone, at least one reaction discharge tube in flow communication with the reaction zone, and at least one solids collection system positioned downstream from the reaction zone and in flow communication with the at least one reactor discharge tube. In the case of the invention, the solids collection system is not contained within the reaction vessel/zone, as is the case in the Sisler apparatus.

Based on the foregoing discussion, Applicants submit that each and every element of claim 10 is not taught or disclosed by Sisler, therefore there can be no anticipation of this claim, if it is indeed deemed to be anticipated by the Examiner. Accordingly, this rejection under §102 should be withdrawn and such action is respectfully requested.

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Claims 11-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sisler, for reasons previously made of record. Applicants respectfully traverse.

As previously established, Sisler does not disclose the inventive embodiments of an apparatus for the continuous production of gaseous chloramine comprising at least one reactor, that comprising a reaction zone and at least one reactor discharge tube in flow communication therewith, the reactor having at least two reactor feed tubes for concentrically feeding feed gas to the reaction zone; and at least one solids which is physically separate from the reaction zone and positioned downstream of said reaction zone, in flow communication with the at least one said reactor discharge tube. Neither does that reference suggest the invention as is claimed in claim 10. There is no source of motivation disclosed in the reference to show why one of ordinary skill in the art would modify the single reaction vessel packed with glass wool, as is taught in Sisler, to provide a reactor comprising have separate, discrete functional parts, i.e. a reaction zone that is in flow communication with at least one solids collection system that is separately positioned from the reaction zone, as is presently claimed. Similarly, there is nothing within the four corners of Sisler, to show why one of ordinary skill in the art would be led to modify the Sisler process by preheating any of the feed gases to minimize the formation of ammonium chloride deposits within the reaction zone. Rather, Sisler does not contemplate minimizing formation of such deposits, only removing them as quickly as possible via the glass wool packing and scrapers that are within the reaction tube. As such, the cited reference does not recognize the technical feasibility, importance or potential value of moving the product gas to a separately positioned solids collection system to provide for removal of the ammonium chloride solids. Accordingly, there is nothing in this reference that teaches or fairly suggests the claimed invention, and the rejection under §103(a) should be withdrawn.

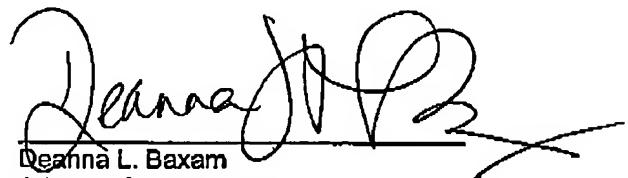
In light of the foregoing amendments and remarks, Applicants submit that all outstanding rejections have been met and overcome, and therefore withdrawal and allowance of the pending claims is requested.

If a direct personal communication might advance the prosecution of this application, the Examiner is invited to contact Applicants' undersigned representative at the telephone number below.

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The Commissioner is authorized to charge any fee required for entry of this amendment,
or credit any overpayment thereof to the assignee's Deposit Account No. 19-3880.

Respectfully submitted,



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-Page 4 of 8 -